

Short Communications

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Group Roosting Behavior of Yellow Tyrannulets (*Capsiempis flaveola*)

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ABSTRACT.—For 4 consecutive evenings in southern Nicaragua, a group of three Yellow Tyrannulets (*Capsiempis flaveola*) roosted in the same plant, and always arrived approximately 45 min before last light. Pre-roosting behavior appeared stereotyped and included mutual preening and a peculiar manner of hopping over one another. These three birds presumably left the roost around first light each morning. Received 4 May 2004, accepted 6 October 2004.

Despite the large amount of time birds spend at roost sites and their presumed vulnerability while asleep, little is known about roosting behavior of most species, especially those in the Neotropics. Skutch (1989) provides a general overview of avian roost sites and behavior, especially of Neotropical passerines. Among the Tyrannidae, Skutch (1989) reported “sleeping in contact” in both Platyrinchinae (Common Tody-Flycatcher, *Todirotum cinereum*) and Tyranninae (Social Flycatcher, *Myiozetetes similis*; Tropical Kingbird, *Tyrannus melancholicus*), whereas “sleeping in pairs” (i.e., roosting in close proximity, but not in contact) was noted in Tyranninae (Gray-capped Flycatcher, *Myiozetetes granadensis*; Boat-billed Flycatcher, *Megarhynchus pitangua*) and Elaeniinae (Yellow-bellied Elaenia, *Elaenia flavogaster*). In these examples, the roosting groups consist of a few individuals known or suspected to be paired or related. Cooperatively breeding birds may be particularly prone to roosting in contact (Skutch 1989), but few tyrannids are reported or suspected to breed cooperatively (2–3 species out of >375), and these species may not always do so (Thomas 1979, Ricklefs 1980, Brown 1987; J. A. Mobley pers. comm.). Migratory kingbirds (Tyranninae: *Tyrannus* spp.) have been observed roosting in large groups during the non-breeding sea-

son (Skutch 1989, Mayer 2004). Some tropical tyrannids that build covered or globular nests also roost (either individually or with young) in these structures year-round (Fluvicolinae: Sulphur-rumped Flycatcher, *Myiobius sulphureipygius*; Skutch 1989), and Eye-ringed Flatbills (Platyrinchinae: *Rhynchocyclus brevirostris*) sometimes build a different type of nest for roosting than for breeding (Skutch 1960). I describe here observations of the roosting behavior of a group of three Yellow Tyrannulets (Elaeniinae: *Capsiempis flaveola*), whose roosting behavior has not been described previously.

The Yellow Tyrannulet (7.9 g) is a sexually monomorphic, open-cup-nesting, lowland tyrannid, resident from eastern Nicaragua south across northern South America, and disjunctly(?) from Bolivia east into southeastern Brazil (Ridgely and Gwynne 1989, Ridgely and Tudor 1994, Hilty 2003). In Central America, it lives in pairs or small (possibly family) groups in lowland thickets, overgrown pastures, and forest edges (Skutch 1960, Ridgely and Gwynne 1989; SW pers. obs.), but is often associated with bamboo in South America (Ridgely and Tudor 1994; SW pers. obs.). The observations reported here were made in the evening, 6–9 April 2004, at the confluence of the Rio Bartola and Rio San Juan, Refugio Bartola, Depto. Rio San Juan, Nicaragua (10° 58' N, 84° 20' W; 30 m asl). Daytime temperatures were approximately 30° C, dropping to 22–25° C at night; there was no precipitation during this period. Observations were made at the edge of a clearing, where an overgrown pasture and secondary forest growth met. The 1.5-ha pasture was adjacent to the Rio San Juan, and consisted mostly of grasses (1.5–2 m high) interspersed with clumps (1.5–3 m high) of an unidentified slender, woody legume with finely pinnate leaves and yellow flowers.

On 6 April, at 17:40 CST (~15 min before sunset; 35 min before complete darkness),

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three Yellow Tyrannulets appeared, giving many single "wit" or "weet" notes. These vocalizations, while having a quality characteristic of the species, were unlike the typical two-syllabled calls given while foraging and at other times of the day. In contrast to the shy behavior of this species described by Skutch (1960), the birds were unwary, and gave no indication of being disturbed by my presence 15 m away. While making many short flights and hops through the vegetation, the group quickly converged on the roost plant, a thin woody legume (2.2 m high) entwined by a vine with cordate leaves. The birds all perched on the same branch 1.5 m above ground, which placed them at the lower edge of the plant's foliage. The birds' position left them completely exposed on three sides, but leaves from the plant and associated vine provided total cover from above—roost-site characteristics that Skutch (1989) reported for several other tyrannids.

Upon alighting on the roost branch, the birds appeared to "jockey" for position, frequently hopping over one another. This could have been an effort to gain the center position, but it was not uncommon for two birds to engage in this hopping while the third looked on from a branch a few centimeters away. This hopping behavior appeared highly stereotyped: a bird hopped over a single adjacent bird, and the hopping bird alit as close as possible to the bird it hopped over. Sometimes the hopping bird simply walked quickly over the back of its neighbor, but more typically the hopping was of the same character as that of the hopping exhibited by some male manakins (Pipridae) at leks. During this time, the birds frequently vocalized and faced opposite directions, but after 7 min they became silent and all faced the same direction. Once settled, the three birds were in direct contact with each other and the contour feathers were fluffed out somewhat. The birds remained in this position, eyes open and looking about, until total darkness. The most common position for the group entailed all birds facing the same direction, the middle bird looking straight ahead, and both outer birds looking away from the center one; this was the position the birds were in at the end of my observations on all 4 evenings. Roosting in direct contact with other individuals has been noted in both elac-

niine and tyrannine tyrannids, and most often involves young siblings, or young and their parents; adult mated pairs apparently roost less often in direct contact with each other (Skutch 1989).

During the next 3 evenings, the birds arrived slightly earlier (17:20–17:30), did not vocalize as much as on the first evening, and were always settled by 17:35. It was not possible to determine whether the birds always approached the roost site from the same direction or traveled together, but each evening they appeared synchronously from the vegetation surrounding the roost plant. A few sporadic observations of Yellow Tyrannulets in the pasture during the day were all of single individuals, but it was difficult to determine whether or not other individuals were nearby in thick vegetation. The birds always roosted in the same plant and alternated daily between roosting on one of two branches that were only a few centimeters apart. On one evening, after the birds had already settled, the birds were flushed from the roost by a pair of Grayish Saltators (*Saltator coerulescens*). The tyrannulets returned, briefly jockeyed for position, engaged in some mutual preening, and settled again within 4 min. Roost site fidelity in birds is not uncommon (Skutch 1989, Willis and Oniki 2003), but because I was only able to check the roost site for these 4 consecutive days, I do not know how frequently the site was used otherwise.

I was unable to determine precisely when the birds left the roost in the morning. On 2 mornings, I checked the roost at 05:30 (~25 min after first light) and the birds were already gone. I made one check of the roost at 04:30 (total darkness) with a flashlight, and the birds were still asleep at the roost. Thus, these birds probably left the roost somewhere around first light.

Despite observing the tyrannulets at close range with binoculars, I was unable to detect any differences in plumage or behavior that might suggest something about the relationship of the birds. Yellow Tyrannulets breed at almost any time of year (in Costa Rica) and lay two eggs per clutch (Skutch 1960); thus, it is not likely that this was a group of three young siblings roosting together, as Skutch (1989) describes for a group of Rusty-margined Flycatchers. Only the female is thought

to incubate eggs in Yellow Tyrannulets, but the male helps feed the nestlings (Skutch 1960). Extra-pair helpers at the nest are not known for Yellow Tyrannulets, and generally are rare among tyrannids (Brown 1987). Thus, I may have been observing two adults with one young, one adult with two young, or three adults. Either of the first two scenarios suggests that the young stay with their parents until their plumage appears (at least under field conditions) identical to that of the adult.

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Foraging by a Red-tailed Hawk along a Wetland Edge: How Large a Duck can be Captured?

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ABSTRACT.—A Red-tailed Hawk (*Buteo jamaicensis*; estimated mass 1,000–1,200 g) failed to kill a Red-breasted Merganser (*Mergus serrator*; estimated mass 1,150 g) that it captured in shallow water (<25 cm), but evidently dispatched a starving Red-necked Grebe (*Podiceps grisegena*; mass 645–660 g). These observations are pertinent to estimating the upper mass limit for successful foraging in water. Received 9 April 2004, accepted 2 September 2004.

Falconers were familiar with prey selection centuries before ideas about “optimal forag-

ing” were formalized (e.g., Krebs and Davies 1978). Originally, their interest was practical and involved questions such as what size prey a hawk could bring to the table. Much later, with the rise of wildlife management programs, raptor enthusiasts turned to broader ecological questions, including the impact and selective effects of predators on prey populations (e.g., Rudebeck 1950, 1951; Craighead and Craighead 1956; Luttich et al. 1970). In a classic study involving four species (*Accipiter nisus*, *Falco columbarius*, *F. peregrinus*, *Haliaeetus albicilla*), Rudebeck (1950, 1951) reported that an average of 19% (range: 14–33%) of birds captured for prey “exhibited injury, abnormality, or abnormal behavior.” From this he concluded that raptors probably selected weak or unfit birds in numbers dis-

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